

**Dr. Duke's Phytochemical and Ethnobotanical Databases**

**List of Plants for FRUCTOSE**

Plant	Part	Low PPM	High PPM	StdDev	Reference
Tamarindus indica	Fruit	90000.0	120000.0	1.0165389329287229	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Solanum nigrum	Fruit	75000.0	100000.0	0.6897250090731907	--
Prunus cerasus	Fruit	61000.0	72400.0	0.2387217941525563	--
Ceratonia siliqua	Fruit	50700.0	118300.0	0.9887597494010026	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Malus domestica	Fruit	50100.0	60800.0	0.04916971831634761	--
Cichorium intybus	Root	45000.0	220000.0	1.999334825861607	--
Manilkara zapota	Fruit	44700.0	71300.0	0.22074702834050203	Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
Prunus domestica	Fruit	27000.0	61000.0	0.05243785755490293	USDA's Ag Handbook 8 and sequelae)
Mangifera indica	Fruit	25700.0	48300.0	-0.15508898409336003	--
Sambucus nigra	Fruit	24100.0	154150.0	1.574573707912044	--
Humulus lupulus	Fruit	15000.0	20000.0	-0.617530686348938	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
Prunus armeniaca	Fruit	14000.0	42000.0	-0.25803537010785266	--
Asimina triloba	Fruit	13000.0	119658.0	1.0109504148307933	--
Ananas comosus	Fruit	6000.0	23000.0	-0.5685085977706082	--
Opuntia ficus-indica	Fruit	4500.0	44100.0	-0.22371990810302178	--
Physalis ixocarpa	Fruit	3420.0	18980.0	-0.6341981964655702	--
Zea mays	Fruit	1000.0	4000.0	-0.878981825433364	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Panax ginseng	Root	200.0	6000.0	-0.4913954846191467	--
Portulaca oleracea	Plant				--
Panax quinquefolius	Root		3400.0	-0.5216566939988194	--
Spondias pinnata	Fruit		18000.0	-0.6502120787344913	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Acacia nilotica</i>	Plant				--
<i>Allium sativum</i> var. <i>sativum</i>	Leaf				Osman, S. A. 1980. Chemical and Biological Studies of Onion and Garlic in an Attempt to Isolate a Hypoglycaemic Extract. Abstr. 4th Asian Symp. Med. Plants Spices Bangkok, Thailand, September 15-19: 117.
<i>Sinapis alba</i>	Seed				--
<i>Daucus carota</i>	Root				--
<i>Vinca minor</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Silybum marianum</i>	Seed				--
<i>Phoenix dactylifera</i>	Fruit		308000.0	4.088589817170726	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
<i>Vanilla planifolia</i>	Fruit		7500.0	-0.8217893887586457	--
<i>Phoenix dactylifera</i>	Seed		15300.0	1.4089399073526936	Abstract (See species file)
<i>Annona muricata</i>	Plant				--
<i>Nicotiana tabacum</i>	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Vetiveria zizanioides</i>	Root				--
<i>Glycine max</i>	Stem				--
<i>Hordeum vulgare</i>	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Aconitum napellus</i>	Root				--
<i>Leonotis nepetaefolia</i>	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Rubus idaeus</i>	Fruit				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Plantago ovata</i>	Seed				--
<i>Vaccinium vitis-idaea</i>	Fruit		50000.0	-0.12730980056563979	--
<i>Lycoris radiata</i>	Bulb		21400.0	1.0	--
<i>Ligustrum japonicum</i>	Fruit				--
<i>Teucrium polium</i>	Plant				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
<i>Acacia decurrens</i>	Plant				--
<i>Panax quinquefolius</i>	Tissue Culture				--
<i>Carica papaya</i>	Fruit				Jim Duke's personal files.
<i>Vaccinium myrtillus</i>	Fruit				--
<i>Carica papaya</i>	Bark				Jim Duke's personal files.
<i>Aloe vera</i>	Plant				Pakistan Encyclopedia Planta Medica. 1986.
<i>Carica papaya</i>	Leaf				Jim Duke's personal files.
<i>Anastatica hierochuntica</i>	Fruit				--
<i>Panax ginseng</i>	Tissue Culture				--
<i>Triticum aestivum</i>	Seed		600.0	-0.8101404467277988	--
<i>Panax ginseng</i>	Leaf		6500.0	-1.351589051251948	--
<i>Ribes rubrum</i>	Fruit		19300.0	-0.6289691736838817	--
<i>Panax ginseng</i>	Stem		1800.0		--
<i>Elytrigia repens</i>	Rhizome				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
<i>Taraxacum officinale</i>	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Cydonia oblonga</i>	Fruit				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Urtica dioica</i>	Root				Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
<i>Allium cepa</i>	Leaf				Osman, S. A. 1980. Chemical and Biological Studies of Onion and Garlic in an Attempt to Isolate a Hypoglycaemic Extract. Abstr. 4th Asian Symp. Med. Plants Spices Bangkok, Thailand, September 15-19: 117.
<i>Juniperus communis</i>	Fruit				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
<i>Theobroma cacao</i>	Seed		2000.0	-0.5987994606248948	--
<i>Cocos nucifera</i>	Juice		22200.0		Jim Duke's personal files.
<i>Polypodium vulgare</i>	Rhizome		21000.0	-0.7503669979202007	--
<i>Cocos nucifera</i>	Root				Jim Duke's personal files.
<i>Coriandrum sativum</i>	Fruit				--
<i>Veratrum album</i>	Root				--
<i>Serenoa repens</i>	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
<i>Psidium guajava</i>	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Scrophularia buergeriana</i>	Root				--
<i>Asparagus lucidus</i>	Root				--
<i>Citrus sinensis</i>	Fruit		23800.0	-0.555436040816387	--
<i>Crocus sativus</i>	Silk Stigma Style				--
<i>Medicago sativa</i>	Plant				--
<i>Maclura pomifera</i>	Shoot				--
<i>Prunella vulgaris</i>	Na				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Angelica sinensis</i>	Root				Chemical Constituents of Oriental Herbs (3 diff. books)
<i>Piper methysticum</i>	Root				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
<i>Pinus sylvestris</i>	Bark				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Pinus sylvestris</i>	Leaf		25000.0	0.31537077862545454	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Trigonella foenum-graecum</i>	Seed				--
<i>Trigonella foenum-graecum</i>	Plant				--
<i>Citrus paradisi</i>	Plant		12400.0		--
<i>Tussilago farfara</i>	Leaf				--
<i>Zingiber officinale</i>	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Ligustrum lucidum</i>	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
<i>Arctium lappa</i>	Root				Jim Duke's personal files.
<i>Terminalia chebula</i>	Fruit		10000.0	-0.7809376482767042	--
<i>Melilotus indica</i>	Plant				--
<i>Ribes uva-crispa</i>	Fruit		41000.0	-0.2743760663006293	--
<i>Valeriana officinalis</i>	Root		9000.0	-0.4564787045656782	--
<i>Cuscuta reflexa</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Asparagus officinalis</i>	Rhizome				--
<i>Aloe vera</i>	Leaf				Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.

Plant	Part	Low PPM	High PPM	StdDev	Reference
Aloe vera	Stem Essent. Oil				Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
Rosa spp	Fruit				--
Rubus chingii	Fruit				--
Artemesia dracunculus	Leaf				--
Rosa canina	Fruit				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
Myrciaria dubia	Fruit				Jim Duke's personal files.
Punica granatum	Fruit				--
Allium cepa	Bulb				Osman, S. A. 1980. Chemical and Biological Studies of Onion and Garlic in an Attempt to Isolate a Hypoclycaemic Extract. Abstr. 4th Asian Symp. Med. Plants Spices Bangkok, Thailand, September 15-19: 117.
Apium graveolens	Shoot				--
Theobroma cacao	Plant				--
Terminalia bellirica	Seed				Singh, P., Sharma, S. 1997. Triterpenoid Constituents of the Seeds of <i>Diospyros melanoxylon</i> , <i>Tecomella undulata</i> and <i>Terminalia bellirica</i> . J. Indian Chem. Soc. 74 6: 504-505.
Borago officinalis	Leaf				Jim Duke's personal files.
Annona squamosa	Fruit				--
Punica granatum	Fruit Juice				--
Rosa canina	Seed				--
Aconitum napellus	Plant				--
Curcuma longa	Rhizome		120000.0	1.413312598024455	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Allium sativum var. sativum	Bulb		14000.0	-1.0	--
Phytolacca americana	Fruit		14000.0	-0.7155748635055977	--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Armoracia rusticana	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Rheum officinale	Root				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
Lycopersicon esculentum	Fruit		11700.0	-0.753158464748984	--
Avena sativa	Root				--
Angelica archangelica	Plant				Pakistan Encyclopedia Planta Medica. 1986.
Teucrium montanum	Leaf		33000.0	1.0362182726264935	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Ribes nigrum	Fruit		36700.0	-0.34464105992956867	--
Cocos nucifera	Resin, Exudate, Sap		2100.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Boswellia serrata	Resin, Exudate, Sap				Sabinsa: A series of well documented proprietary PR booklets, e.g. Sabinsa Corps. 1998. Bronchial Asthma - Its etiology and control with traditional herbal extracts. Sabinsa Corporation. Piscataway, NJ. 49 pp.
Vitis vinifera	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
Allium ampeloprasum	Plant				--
Polygonum hydropiper	Plant				--
Jatropha curcas	Seed				--
Zizyphus jujuba	Fruit				--
Rhamnus cathartica	Fruit				--
Artemisia dracunculus	Root				--
Alocasia macrorrhiza	Plant				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
<i>Ulmus rubra</i>	Bark				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Harpagophytum procumbens</i>	Root		2700.0	-0.529803942677962	--
<i>Terminalia bellirica</i>	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Helianthus annuus</i>	Flower				--
<i>Harpagophytum procumbens</i>	Tuber				--
<i>Berberis vulgaris</i>	Plant				--
<i>Avena sativa</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Ficus carica</i>	Fruit		22950.0	-0.569325632580247	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
<i>Musa x paradisiaca</i>	Fruit		35000.0	-0.3724202434572889	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
<i>Apium graveolens</i>	Plant				--
<i>Santalum album</i>	Fruit				--
<i>Morus alba</i>	Leaf				--
<i>Teucrium chamaedrys</i>	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Olea europaea</i>	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Cyphomandra betacea</i>	Fruit				--
<i>Glycyrrhiza glabra</i>	Root				--

Plant	Part	Low PPM	High PPM	StdDev	Reference
Matricaria recutita	Plant				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of <i>Glycyrrhiza-glabra</i> . Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
Anogeissus latifolia	Plant				--
Ginkgo biloba	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of <i>Glycyrrhiza-glabra</i> . Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
Zingiber officinale	Rhizome				--
Arnica montana	Rhizome		25000.0	-0.662945600104255	--
Vaccinium corymbosum	Fruit				--
Symphytum officinale	Root				--
Citrullus colocynthis	Petiole				--
Solanum tuberosum	Plant				--